Since the Earth passed through the planes of the orbits in 1882, the only observations of the inner satellites which have come to my knowledge are the few measures, published in vol. iv. pp. 340, 341 of the *Bulletin Astronomique*, made by M. Perrotin in 1887, at a time when the apparent orbits were still too narrow to allow the satellites to be observed except not far from their greatest elongations or digressions. The apparent orbits are now sufficiently opened to allow the satellites to be seen in any part, and it is high time that good measures should be secured, before *Uranus* gets too far south for exact observing in northern latitudes. Cannot observers with powerful instruments be induced to contribute at least some good position-angles of the satellites during the present opposition?

A sidereal revolution of *Uranus* being performed in approximately 84 sidereal years, the apparent positions of the planet with regard to fixed stars recur very nearly after that period, so that the apparent path of *Uranus* during the present apparition differs only slightly from what it was in 1810. In the Berlin *Jahrbuch* for 1814 Bode represents in fig. 2 of the plate the path of the planet from 1810 April 26 to May 5, when it was near the stars 8 and 9 α *Libræ* (the 1 α and 2 α *Libræ* of Maskelyne's fundamental catalogue). On p. 167 Bode mentions that on April 29 he compared *Uranus* with 1 α *Libræ*, and found it just as bright, only somewhat paler.

Note on the Transit of Mercury over the Sun's Disc, which takes place for Venus on 1894 *March* 21, *and on the Transits of Venus and Mercury, which occur for Saturn's System on the same day.* By A. Marth.

After an interval of thirty years, during which no transit of *Mercury* across the Sun has occurred for *Venus*, the first of a new group of transits takes place on March 21. The centre of *Mercury's* disc (of $20''\cdot3$ apparent diameter) will enter upon the Sun's disc (of $1333''\cdot7$ semi-diameter) for the centre of *Venus* at $10^h\ 48^m$ G. M. T. in pos. angle 21° (reckoned from the circle of ecliptical latitude), and will leave it at $14^h\ 30^m$ in pos. 319°, the difference of the parallaxes being $16''\cdot4$, which data will be sufficient for a graphical representation.

Some hours before this transit both planets will have crossed the Sun's disc for *Saturn's* system, *Venus* entering as a spot of $2''\cdot0$ diameter for *Saturn's* centre on March 20 at $18^h\ 50^m$ G. M. T. in pos. angle 34°, and leaving it on March 21 at $0^h\ 56^m$ in pos. 322°; while *Mercury*, a tiny spot of only $0''\cdot7$ diameter, enters at $5^h\ 9^m$ in pos. 11°, and leaves at $7^h\ 41^m$ in pos. 337°, the apparent semi-diameter of the Sun's disc being $99''\cdot2$.

The following is a list of the transits of the planets since 1830:

Transits of Mercury for Venus.

	Helioc.	Longit.
	°	°
1843 Feb. 28·7		203·4
1847 Feb. 27·8	21·5	
1848 Sept. 13·9		206·9
1852 Sept. 12·5	23·8	
1858 Mar. 29·2	26·1	
1863 Oct. 12·9	28·5	
1894 Mar. 21·5		202·2

Transits of Venus for Saturn.

1835 Oct. 13·4		205·9
1836 May 30·0		213·2
1851 June 22·8	26·5	
1852 Feb. 7·6	34·6	
1864 Sept. 7·7		199·9
1865 Apr. 25·0		207·3
Dec. 10·2		214·6
1880 May 17·5	20·1	
1881 Jan. 2·2	28·2	
Aug. 20·0	36·3	
1894 Mar. 20·9		201·1
Nov. 5·2		208·5
1895 June 22·4		215·8

Transits of Mercury for Saturn.

	Helioc.	Longit.
	°	°
1835 June 15·2		202·0
Sept. 12·0		204·8
Dec. 9·9		207·7
1836 Mar. 7·7		210·5
1851 Jan. 5·2	20·6	
Apr. 3·7	23·6	
July 1·2	26·8	
Sept. 27·7	29·9	
Dec. 25·3	33·0	
1864 Nov. 1·2		201·6
1865 Jan. 29·0		204·5
Apr. 27·9		207·4
July 25·8		210·2
1880 May 24·3	20·4	
Aug. 20·8	23·4	
Nov. 17·3	26·6	
1881 Feb. 13·9	29·7	
May 13·3	32·8	
1894 Mar. 21·3		201·2
June 18·0		204·0
Sept. 14·9		206·9
Dec. 12·7		209·7

Some hours before the occurrence of the transit of *Mercury* for the dayside of *Venus* on March 21, the nightside of the planet is favoured by another phenomenon of some interest—a partial eclipse of the satellite of the Earth. For those readers who may like to form some clear notions of the apparent positions of the Moon as seen from *Venus*, the following short ephemeris of the polar and rectangular co-ordinates of the Moon, referred to the Earth and its axis, may serve for a graphical representation:

Greenwich Noon. 1894.	*s*	*p*	*x*	*y*	D	*d*
	″	°	″	″	″	″
Mar. 18	235·3	355·5	− 18·4	+234·6	45·3	12·3
19	289·6	67·9	+ 268·4	+109·0	44·6	12·1
20	531·2	92·1	530·9	− 19·5	43·9	11·9
21	769·8	100·7	756·4	143·4	43·1	11·7
22	970·1	105·3	935·7	256·0	42·4	11·5
23	1119·5	108·3	1062·8	351·8	41·8	11·4
24	1213·0	110·6	+1135·3	−427·0	41·1	11·2

D and *d* are the apparent diameters of the Earth and Moon, their greatest defects of illumination on March 21 being 4″·7 and 1″·3 in position-angle 106°.

The corresponding data for the Moon's position, as seen from *Mercury*, are:

Greenwich Noon. 1894.	*s*	*p*	*x*	*y*	D	*d*
	″	°	″	″	″	″
Mar. 18	459·0	305·2	−375·2	+264·4	29·1	7·9
19	263·9	311·6	192·6	175·5	29·0	7·9
20	76·3	354·0	− 8·0	+ 75·9	28·8	7·8
21	180·3	98·5	+178·6	− 26·7	28·6	7·8
22	371·5	109·7	349·8	125·1	28·3	7·7
23	540·2	113·2	496·5	212·8	28·0	7·6
24	674·7	115·1	+611·5	−285·2	27·6	7·5

The greatest defects of illumination on March 21 are 0″·4 and 0″·1 in position-angle 104.°.

But *Mercury* is favoured at the same time by a grander sight —the aspect of brilliant *Venus* near *Saturn*. On March 21, at $14^h·3$ G. M. T., *Venus* comes within one degree of *Saturn*, approaches it most closely on March 22 at $16^h·5$, at a distance of 25′, and reaches again the distance of one degree on March 23 at $18^h·8$. The apparent motions of both planets are retrograde, the conjunction being the middle one of three conjunctions occurring during the same synodical revolution. While, during this second conjunction, *Saturn* will appear for *Mercury* of about the brightness which it will have for the Earth in the middle of June, *Venus*, with an apparent diameter of 57″ or more, will appear for *Mercury* eight times as brilliant as it appears to the Earth when at its greatest brilliancy: this occurs just at the same time.

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